THIS OPINION WAS NOT WRITTEN FOR PUBLICATION

The opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.

Paper No. 21

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte TEIZO YOSHIMURA
ELIZABETH A. ROBINSON
ETTORE APPELLA and EDWARD J. LEONARD

Appeal No. 94-0757
Application 07/330,446[1]

ON BRIEF

Before RONALD SMITH, WINTERS and GRON, Administrative Patent Judges.

WINTERS, Administrative Patent Judge.

DECISION ON APPEAL

This appeal was taken from the examiner's decision refusing to allow claims 9 and 11 through 19. Claims 1 through 7 and 20

---

[1] Application for patent filed March 30, 1989. According to applicants, the application is a continuation-in-part of Application 07/304,234, filed January 31, 1989.

through 25, which are the only other claims remaining in the application, stand withdrawn from further consideration by the examiner as directed to a non-elected invention.

Representative Claim

Claim 9, which is illustrative of the subject matter on appeal, reads as follows:

9. A cDNA encoding for a human monocyte chemoattractant peptide, which comprises the following nucleotide sequence or a mutation or variation thereof, which is capable of encoding a polypeptide possessing monocyte chemoattractant activity:

CAG CCA GAT GCA ATC AAT GCC CCA GTC ACC TGC TGT TAT AAC
TTC ACC AAT AGG AAG ATC TCA GTC CAG AGG CTC GCG AGC TAT
AGA AGA ATC ACC AGC AAG TGT CCC AAA GAA GCT GTG ATC TTC
AAG ACC ATT GTG GCC AAG GAG ATC TGT GCT GAC CCC AAG CAG
AAG TGG GTT CAG GAT TCC ATG CAG CAC CTG GAC AAG CAA ACC
CAA

wherein,

C is cytosine, T is thymine, A is adenine, and G is guanine.

The References

The reference relied on by the examiner is:

Valente et al. (Valente), "Purification of a Monocyte Chemotactic Factor Secreted by Nonhuman Primate Vascular Cells in Culture," Biochemistry, Volume 27, pages 4162-4168, 1988.

The Issues

The issues presented for review are:

(1) whether the examiner correctly rejected claims 9 and 11 through 19 under 35 U.S.C. § 103 as unpatentable over Valente, and

(2) whether the examiner correctly rejected claim 9 under 35 U.S.C. § 112, first paragraph, as based on a non-enabling disclosure.

Deliberations

Our deliberations in this matter have included evaluation and review of the following materials:

(1) the instant specification, including Figures 1 through 6, and all of the claims on appeal;

(2) appellants' main Brief and Reply Brief before the Board;

(3) the Examiner's Answer and Supplemental Answer, and the Communication mailed by the examiner July 2, 1993;

(4) the Valente reference cited and relied on by the examiner;

(5) the Yoshimura declaration, filed under the provisions of 37 CFR § 1.132, executed May 14, 1992; and

(6) the Yoshimura reference attached as Appendix I to the Rule 132 declaration.

As stated by the examiner in the Communication mailed July 2, 1993, the "Reply to Supplemental Examiner's Answer" filed April 22, 1993, will not be entered. Accordingly, for the purposes of this appeal, we have not considered that paper.

On consideration of the record, including the above-listed materials but excluding the "Reply to Supplemental Examiner's Answer" filed April 22, 1993, we reverse the rejection of claims 9 and 11 through 19 under 35 U.S.C. § 103 as unpatentable over Valente. We affirm the rejection of claim 9 under 35 U.S.C. § 112, first paragraph, as based on a non-enabling disclosure, and we enter a new ground of rejection of claims 12 through 19 under that statutory provision.

Section 103

In rejecting the appealed claims under 35 U.S.C. § 103, the examiner begins with Valente's disclosure of "the complete purification to homogeneity" of SMC-CF or smooth muscle cell derived chemotactic factor. See Valente, page 4162, last paragraph. According to the examiner, it would have been obvious to determine the amino acid sequence of that chemotactic factor, to obtain its DNA sequence, and further to clone the gene encoding the chemotactic factor. By thus working "back" from protein to gene, the examiner asserts, a person having ordinary skill in the art would have arrived at the cDNA recited in each claim on appeal within the meaning of 35 U.S.C. § 103.

Like the situation presented in In re Deuel, 51 F.3d 1552, 34 USPQ2d 1210 (Fed. Cir. 1995) and In re Bell, 991 F.2d 781, 26 USPQ2d 1529 (Fed. Cir. 1993), the examiner's focus on a general

method of gene cloning is misplaced. In our judgment, Deuel and Bell are dispositive and here compel a conclusion that the examiner's rejection under 35 U.S.C. § 103 constitutes error.

The rejection of claims 9 and 11 through 19 under 35 U.S.C. § 103 as unpatentable over Valente is reversed.

Section 112, first paragraph

On the surface, claim 9 may appear relatively narrow in scope because appellants recite, in the body of that claim, a specific nucleotide sequence. Looking under the surface, however, we find that claim 9 covers cDNA which comprises the recited nucleotide sequence, or a mutation or variation thereof, which is capable of encoding a polypeptide possessing human monocyte chemoattractant activity. As correctly pointed out by the examiner, "a mutation or variation thereof" embraces any type of mutation or variation including, inter alia, insertional mutations, deletion mutations, rearrangements, point mutations, or allelic variations. Furthermore, the mutation or variation may occur at any triplet of bases in the nucleotide sequence. Viewing the situation in this light, we find that appellants are not "locked in" to the specific nucleotide sequence recited in claim 9. Rather, the nucleotide sequence can vary considerably provided that the claimed cDNA is capable of encoding a polypeptide possessing human monocyte chemoattractant activity. As

stated in appellants' main Brief, pages 10 and 11, biological fluids often contain many different chemotactic attractants including, but not limited to, the purified protein having monocyte chemotactic activity disclosed by Valente.

Like claims 4 and 6 presented in In re Deuel, 51 F.3d 1552, 34 USPQ2d 1210 (Fed. Cir. 1995), claim 9 before us generically encompasses all nucleotide sequences encoding a polypeptide of interest. Written in such result-oriented form, claim 9 is thus tantamount to the general idea of all genes encoding a polypeptide which possesses human monocyte chemoattractant activity, all solutions to the problem. Where, as here, appellants' patent application does not describe how to obtain any DNA except the disclosed cDNA nucleotide sequence which codes for a polypeptide having the amino acid sequence recited in claim 11, we find that claim 9 is not adequately supported by the disclosure of the application. See In re Deuel, 51 F.3d 1552, 1560, 34 USPQ2d 1210, 1216 (Fed. Cir. 1995); Amgen Inc. v. Chugai Pharmaceutical Co., 927 F.2d 1200, 1212-14, 18 USPQ2d 1016, 1026-28 (Fed. Cir.) (generic DNA sequence claims held invalid under 35 U.S.C. § 112, first paragraph), cert. denied, 502 U.S. 856 (1991). The scope of enablement in the specification is not commensurate with the scope of claim 9 and, accordingly, we affirm the rejection of that claim under 35 U.S.C. § 112, first paragraph, as based on a non-enabling disclosure.

New Ground of Rejection

Under the provisions of 37 CFR § 1.196(b), we enter the following new ground of rejection.

Claims 12 through 19 are rejected under 35 U.S.C. § 112, first paragraph, as based on a non-enabling disclosure. Claims 12, 13, and 14 are drawn to recombinant vectors containing the cDNA of claim 9. Claims 15, 16, and 17 are drawn to microorganisms containing the vectors of claims 12, 13, and 14 respectively. Claim 18 defines the method of producing a human monocyte chemoattractant factor which comprises culturing the microorganism of claim 16, under conditions that allow for expression of said factor. Likewise, claim 19 defines a method of producing a human monocyte chemoattractant factor which comprises culturing the microorganism of claim 17, under conditions that allow for expression of said factor.

Based on that summary of the subject matter sought to be patented in claims 12 through 19, it should be apparent that each claim includes, as an essential limitation, "the cDNA of claim 9." In the preceding portion of this opinion entitled "Section 112, first paragraph", we explain why the scope of enablement in the specification is not commensurate with the scope of claim 9 and, accordingly, we affirm the rejection of claim 9 under

35 U.S.C. § 112, first paragraph. It follows that claims 12 through 19 are likewise based on a non-enabling disclosure.

Conclusion

For the reasons stated above, we reverse the rejection of claims 9 and 11 through 19 under 35 U.S.C. § 103 as unpatentable over Valente. We affirm the rejection of claim 9 under 35 U.S.C. § 112, first paragraph, as based on a non-enabling disclosure. We enter a new ground of rejection of claims 12 through 19 under 35 U.S.C. § 112, first paragraph, as based on a non-enabling disclosure.

Any request for reconsideration or modification of this decision by the Board of Patent Appeals and Interferences based upon the same record must be filed within one month from the date hereof (37 CFR 1.197).

With respect to the new rejection under 37 CFR 1.196(b), should appellants elect the alternate option under that rule to prosecute further before the Primary Examiner by way of amendment or showing of facts, or both, not previously of record, a shortened statutory period for making such response is hereby set to expire two months from the date of this decision. In the event appellants elect this alternate option, in order to preserve the right to seek review under 35 U.S.C. 141 or 145 with respect to the affirmed rejection, the effective date of the affirmance is

deferred until conclusion of the prosecution before the examiner unless, as a mere incident to the limited prosecution, the affirmed rejection is overcome.

If the appellants elect prosecution before the examiner and this does not result in allowance of the application, abandonment or a second appeal, this case should be returned to us for final action on the affirmed rejection, including any timely request for reconsideration thereof.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR 1.136(a).

AFFIRMED-IN-PART
37 CFR § 1.196(b)

RONALD H. SMITH)
Administrative Patent Judge)
)
)
)
SHERMAN D. WINTERS) BOARD OF PATENT
Administrative Patent Judge) APPEALS AND
) INTERFERENCES
)
)
TEDDY S. GRON)
Administrative Patent Judge)

Appeal No. 94-0757
Application 07/330,446

Birch, Stewart, Kolasch & Birch
P.O. Box 747
Falls Church, Virginia 22040-0747